



February 22, 2012

Julius Genachowski, Chairman  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

**Re: Comments on LightSquared's Petition for Declaratory Ruling in IB Docket No. 11-109**

Dear Chairman Genachowski:

The National Agricultural Aviation Association (NAAA) appreciates the opportunity to comment on LightSquared's Technical Working Group Report, IB Docket No. 11-109. Like the more than 100,000 companies and millions of users who depend on the Global Positioning System (GPS) we are extremely concerned with the widespread interference that will likely result from LightSquared's planned terrestrial operations. We vehemently disagree with LightSquared seeking a declaratory ruling regarding GPS devices not being protected against harmful interference caused by ancillary terrestrial component (ATC) operations and strongly urge you to deny their request.

NAAA consists of more than 1,700 members in 46 states, and represents the interests of small business owners and pilots licensed as commercial applicators that use aircraft to enhance the production of food, fiber and bio-fuel; protect forestry; protect waterways, pastureland and rangeland from invasive species; and control health-threatening pests. Pesticides and their timely application play a vital role in protecting our food and water supply, public health, natural resources, infrastructure and green spaces. Approximately 18 percent of crop protection products applied in the U.S. are applied by air. Aerial application is often the only, and/or most economic method for timely pesticide application. It permits large and often remote areas to be treated rapidly, thus ensuring timely and efficient service.

GPS technology is a vital tool for the agricultural aviation industry. GPS is equipped in 99% of the aircraft in the U.S. agricultural aviation fleet according to a recent NAAA industry survey. Not only does it provide swath guidance to within one meter accuracy of where ag pilots want to place chemicals, crop protection products, seeds or fertilizers, but it also has allowed for considerably improved occupational safety, as there is no longer a need for human flaggers. The

GPS unit works in conjunction with Geographical Information System (GIS) software that many pilots use, providing a precise map of an exact field location using infrared technology to determine the various field conditions. The GPS unit, combined with GIS software capabilities and the variable rate flow controller, allow the product to be applied in varying dosages according to crop needs in the field and targeting the material to be delivered only where it's needed. This minimizes pesticide application needed and spray drift potential. Another technology system used by agricultural aviators to ensure more targeted and efficient applications of crop protection products is the Aircraft Integrated Meteorological Measurement System (AIMMS). AIMMS provides valuable wind speed, direction, relative humidity and temperature information to the pilot so that he can further precisely target his application—it is essentially an on-board anemometer. It develops weather-related readings each second (or approximately every 200 feet for a moving ag aircraft), syncs those data with the GPS which provides the exact latitudinal and longitudinal location of the ag aircraft and that data is translated to a light bar directing the pilot how to line up the aircraft to make a precise application taking into account wind speed and direction. This further mitigates drift and ensures an effective application. The meteorological data may also be saved into the aircraft's GPS system.

All of the testing conducted has shown serious interference for high-precision GPS users and for LightSquared to presume the GPS industry should be responsible for shielding their devices from LightSquared's signals is simply unacceptable. This is akin to asking an airport to discontinue flights because the noise proves bothersome to a newly developed residential community adjacent to the airport. It is simply not feasible to ask GPS users to bear the brunt of the burden associated with fixing a problem created by LightSquared in the first place. Beyond the impracticality of LightSquared's plan to operate in the spectrum immediately adjacent to GPS, and even if it was a viable consideration, it would undoubtedly require a minimum of 10-15 years for the entire population of GPS users to prepare for such a change. While the amount of money and time involved may be trivial to LightSquared, it is nothing short of ruinous for many of the high-precision users who would be affected. To reiterate, supposing such a transition could take place within a short period of time and with little fallout is completely improbable.

NAAA remains committed to working with the FCC in reaching a beneficial solution, but we are strongly opposed to the perceived expectation that small businesses utilizing GPS, such as aerial application, should solve the disastrous dilemma created by LightSquared's proposed wireless broadband network. A solution must be found that will allow for expanded wireless Internet capability for the future and not compromise the millions of Americans who depend on GPS daily.

If not the results would be devastating to our small, but important industry. Aerial application is so important to agricultural, forestry and public health protection because it is by far the fastest method of application. Furthermore, when the presence of water, wet soil conditions, rolling terrain or dense plant foliage prevents the use of other methods of pesticide application, aerial application may be the only remaining method of treatment. Moreover, aerial application is

conductive to higher crop yields, as it is non-disruptive to the crop and causes no soil compaction. Applying crop protection products by air is an essential component of no-till or reduced tillage farming operations which limit storm water runoff and reduces soil erosion. These farming methods, through their preservation of organic matter and topsoil, help maintain productive soils and reduce greenhouse gas emissions through the sequestration of carbon. According to the USDA's Economic Research Service, there are a total of 442 million cropland acres in the U.S. Approximately 70 percent are commercially treated with crop protection products, and an estimated 25 percent of commercial crop protection product applications, or as stated earlier approximately 18 percent of all applications, are made via aerial applications. As a result, NAAA estimates that 77 million acres of cropland are treated via aerial application in the U.S. each year. This does not include the aeriually treated pasture and rangeland of which there are 587 million total acres in the U.S. or the 651 million total forestry acres and 60 million total urban acres in the U.S.—a portion of which is treated by air.

Thank you for consideration of our comments against LightSquared's declaratory ruling.

Sincerely,

A handwritten signature in dark ink, appearing to read "Andrew D. Moore". The signature is fluid and cursive, with the first name "Andrew" and last name "Moore" clearly legible, and "D." as a middle initial.

Andrew Moore  
Executive Director